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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/736,412	12/15/2000	Ying Liu	3313-0246P	7736

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EXAMINER

SHORTLEDGE, THOMAS E

ART UNIT PAPER NUMBER

2654

DATE MAILED: 08/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/736,412

Applicant(s)

LIU ET AL.

Examiner

Thomas E Shortledge

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 8, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Balakrishnan et al. (5,952,942).

As to claim 1, Balakrishnan et al. teach:

a device with a CCITT standard keypad to enter letters (fig. 1, element 16);

receiving key messages from the standard keypad (activating keys of a keypad, col. 2, lines 53-54);

obtaining a mapping table of the standard keypad (a key represents a plurality of characters, col. 2, line 53. the mapping table would be inherent within each key representing a plurality of characters);

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converting the keys in order according to the mapping into the corresponding letters and numbers (each entry is appended by the microprocessor as it is received with previously entered digits and the various possible corresponding letters are compared, col. 4, lines 20-30);

setting a searching range to the letter and number and searching a dictionary database thereby (next step is comparison against the contents of the dictionary, col. 4, lines 26-28);

displaying a searching result (fig. 4, element 180).

As to claim 8, Balakrishnan et al. teach the key message has the function of fuzzy input, (the first input digit 2 can correspond to a, b, or c, col. 4, line 31).

As to claim 9, Balakrishnan et al. teach the fuzzy input function is achieved by making a list of possible letter combinations of the keys pressed for the user to select (the highest ranked match is displayed with alternatives, the user is then able cycle through the choices to select the appropriate one, col. 6, lines 38-40).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to

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be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Balakrishnan et al. as described in claim 1 above, in view of Jin et al. (6,172,625).

As to claim 2, Balakrishnan et al. do not teach a complete bilingual dictionary system.

However, Jin et al. teach the inclusion of a Chinese and English dictionary (col. 4, line 46).

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine the text input system of Balakrishnan et al. and the bilingual dictionary of Jin et al. to improve the method of storage of data suitable for data entry disambiguation as taught by Jin et al. (col. 1, lines 53-54).

As to claim 3, Balakrishnan et al. do not teach the bilingual dictionary system comprises a bilingual dictionary database and a dictionary searching engine.

However, Jin et al. teach a English and Chinese dictionary and look-up tables to identify words in the dictionary (col. 4, line 46 and col. 2, line 28-32).

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine the text input system of Balakrishnan et al. and

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the bilingual dictionary and searching method of Jin et al. to improve the method of storage of data suitable for data entry disambiguation as taught by Jin et al. (col. 1, lines 53-54).

As to claim 4, Balakrishnan et al. do not teach that the bilingual dictionary database comprises an English-Chinese dictionary database, An English vocabulary variation database, a Chinese-English dictionary database, a data decompressing table and a key word index.

However, Jin et al. teach:

English-Chinese dictionary database (English and Chinese dictionary database, col. 4, lines 45-46);

an English vocabulary variation database (a dictionary of words including common proper nouns and acronyms, col. 2, lines 33-34);

a Chinese-English dictionary database (English and Chinese dictionary database, col. 4, lines 45-46);

a data decompressing table (a look-up table with four columns and 512 rows, for the three digits and dictionary table reference, col. 2, lines 28-32);

key word index (words are searched as the inputted letters are aligned with the dictionary, col. 2, lines 32-45).

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine the text input system of Balakrishnan et al. and the dictionary databases and look-up tools of Jin et al. to improve the method of

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storage of data suitable for data entry disambiguation as taught by Jin et al. (col. 1, lines 53-54).

As to claim 5, Balakrishnan et al. suggest the English database can be replaced by other suitable language database (various other alphabets such as Russian or Asian may be used, col. 3, lines 47-50).

As to claim 6, Balakrishnan et al. do teach the dictionary data are sorted by the length and alphabetic order of the keyword (finding matches based on the numeric sequential input, and the matches with the highest probability are displayed, col. 4, lines 31-46).

As to claim 7, Balakrishnan et al. do teach that the dictionary searching engine includes a data decompressing program, a data searching program and a format conversion program (breaking the word down based on the sequence of the numeric input, comparing input to the contents of the dictionary, converting the numeric input to a word with the highest probability of matching the input, col. 4, line 25-48).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lehtonen et al. (6,014,573), Gutowitz, (6,219,573), Makela et al. (6,047,196), Nowlan et al. (6,204,848), and Yoshimura et al. (4,991,135).

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Lehtonen et al. teach a telephone user interface that is able to accept numerous different inputs.

Gutowitz teaches the input of text on a standard phone using double tapping.

Makela et al. teach a mobile phone able to accept input through a standard 12 key keypad or through an alpha numeric keypad.

Nowlan et al. teach data entry apparatus based on a keypad with a limited number of available keys.

Yoshimura et al. teach an electronic dictionary comprising an input, a display, memory, and a searching device.

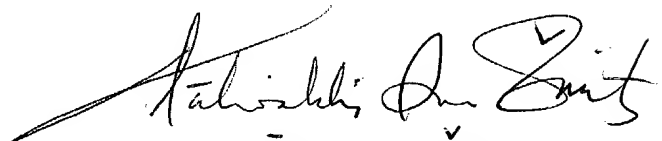
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas E Shortledge whose telephone number is (703)605-1199. The examiner can normally be reached on M-F 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Talivaldis Smits can be reached on (703)306-3011. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TS
8/09/04



TĀLIVALDIS IVARS SMITS
PRIMARY EXAMINER